

Abstract of the Invention

Exemplary mechanically-flattened fibers of the invention comprise generally
5 elongate bodies having varied width or thickness dimensions and micro-diastrophic
surface deformities. Preferred fibers are elongate synthetic polymer or multipolymer
blend fibers for reinforcing matrix materials such as concrete, shotcrete, gypsum-
containing materials, asphalt, plastic, rubber, and other matrix materials. Preferred
methods for manufacturing such fibers comprise subjecting synthetic polymer fibers
10 to compressive forces sufficient to achieve flattening and surface micro-diastrophism
without substantially shredding and abrading the fibers. Further exemplary fibers and
methods involve mechanically-flattening intertwined or braided fibers or fiber
bundles, thereby providing fibers having physical impressions thereon of the
intertwinement or braiding and, optionally though preferably of micro-diastrophic
15 surface deformities.